*FIG. 1*

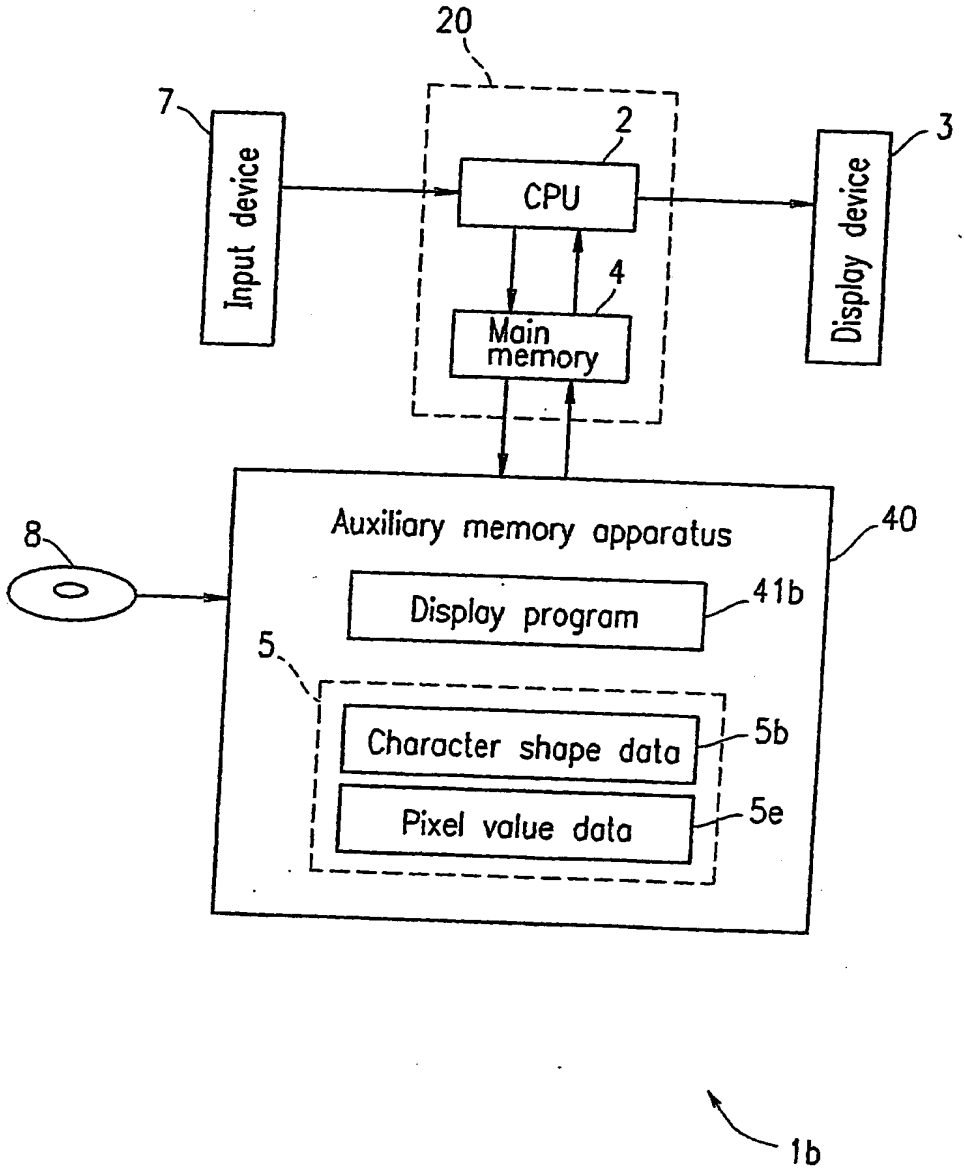

20
7
Input device
2
CPU
3
Display device
4
Main memory
Auxiliary memory apparatus
40
8
Display program
41b
5
Character shape data
5b
Pixel value data
5e
1b

FIG. 2A

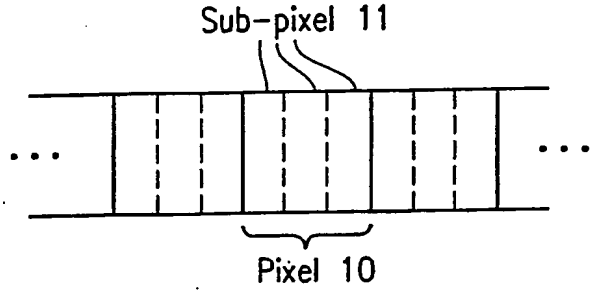



FIG. 2B

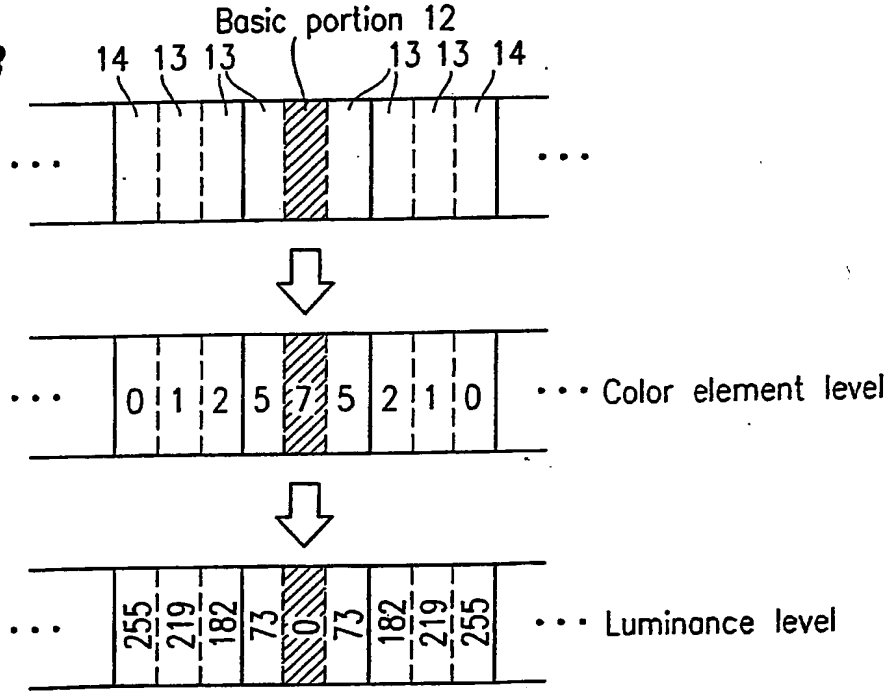



FIG. 2C

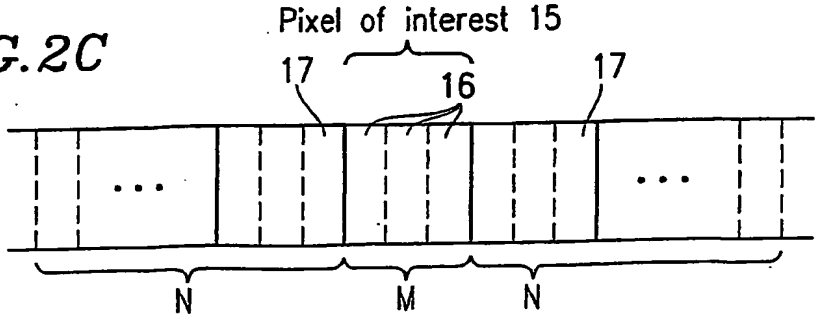


*FIG. 3*

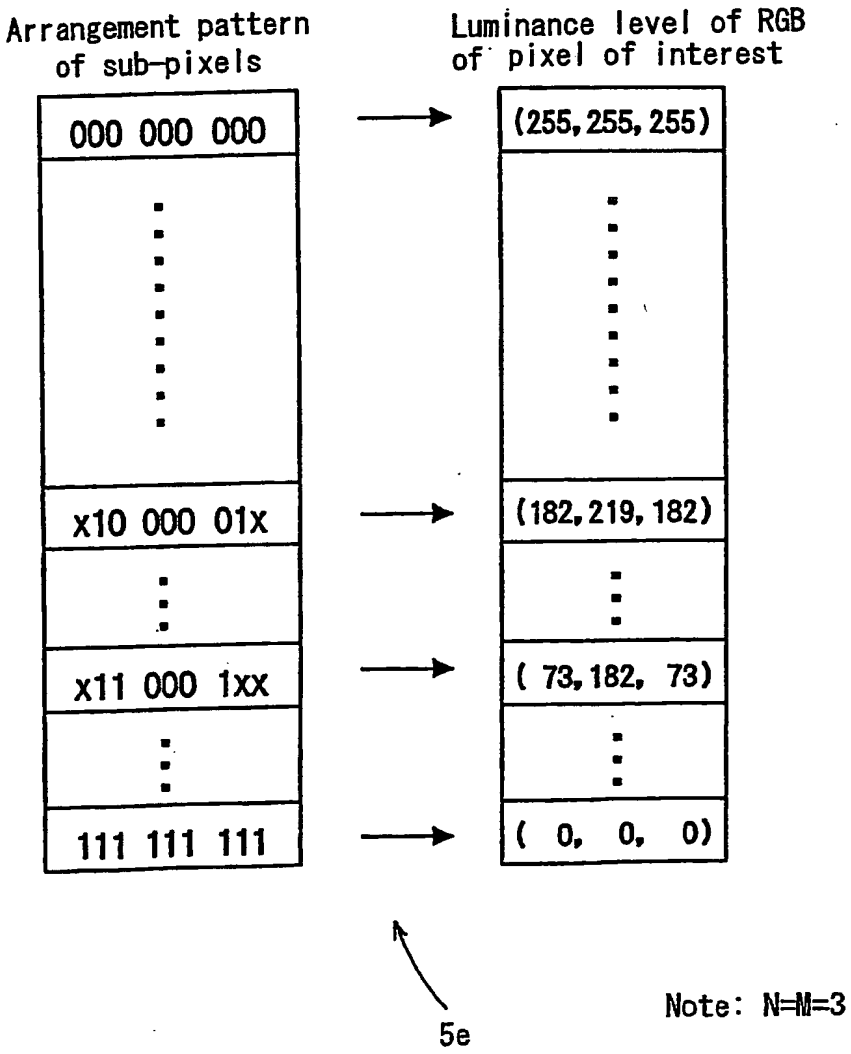

Arrangement pattern of sub-pixels
Luminance level of RGB of pixel of interest
000 000 000
(255,255,255)
x10 000 01x
(182,219,182)
x11 000 1xx
( 73,182, 73)
111 111 111
( 0, 0, 0)
5e
Note: N=M=3

*FIG.4*

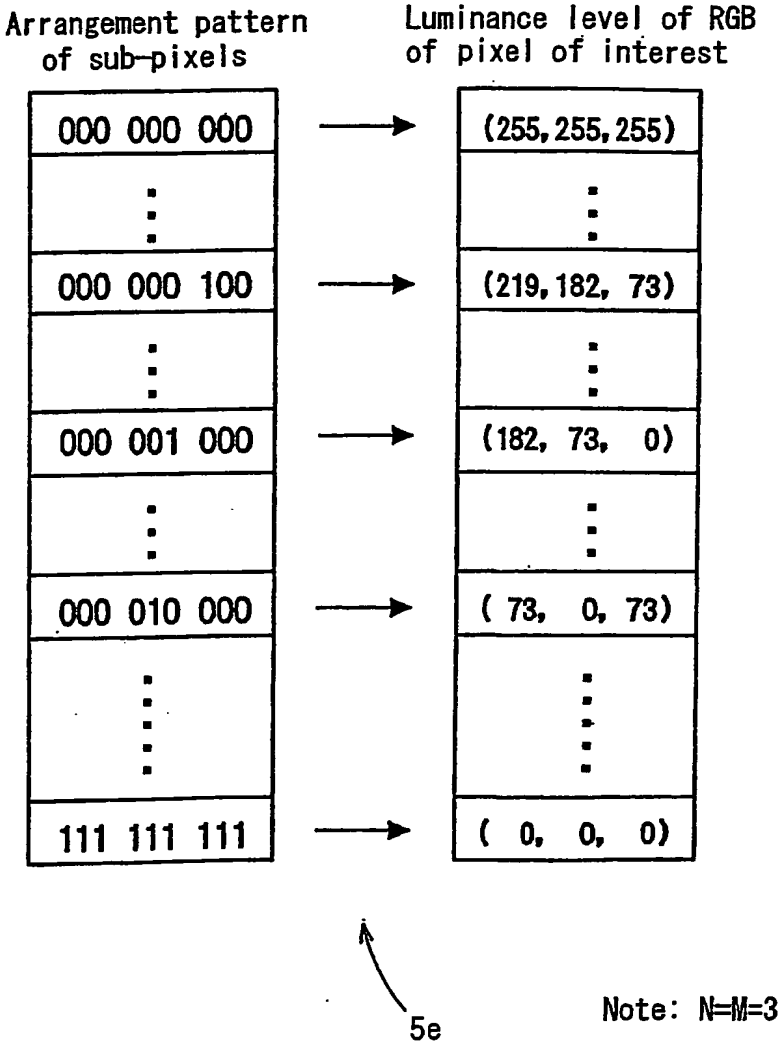

Arrangement pattern of sub-pixels
Luminance level of RGB of pixel of interest
000 000 000
(255,255,255)
000 000 100
(219,182, 73)
000 001 000
(182, 73, 0)
000 010 000
( 73, 0, 73)
111 111 111
( 0, 0, 0)
5e
Note: N=M=3

FIG.5

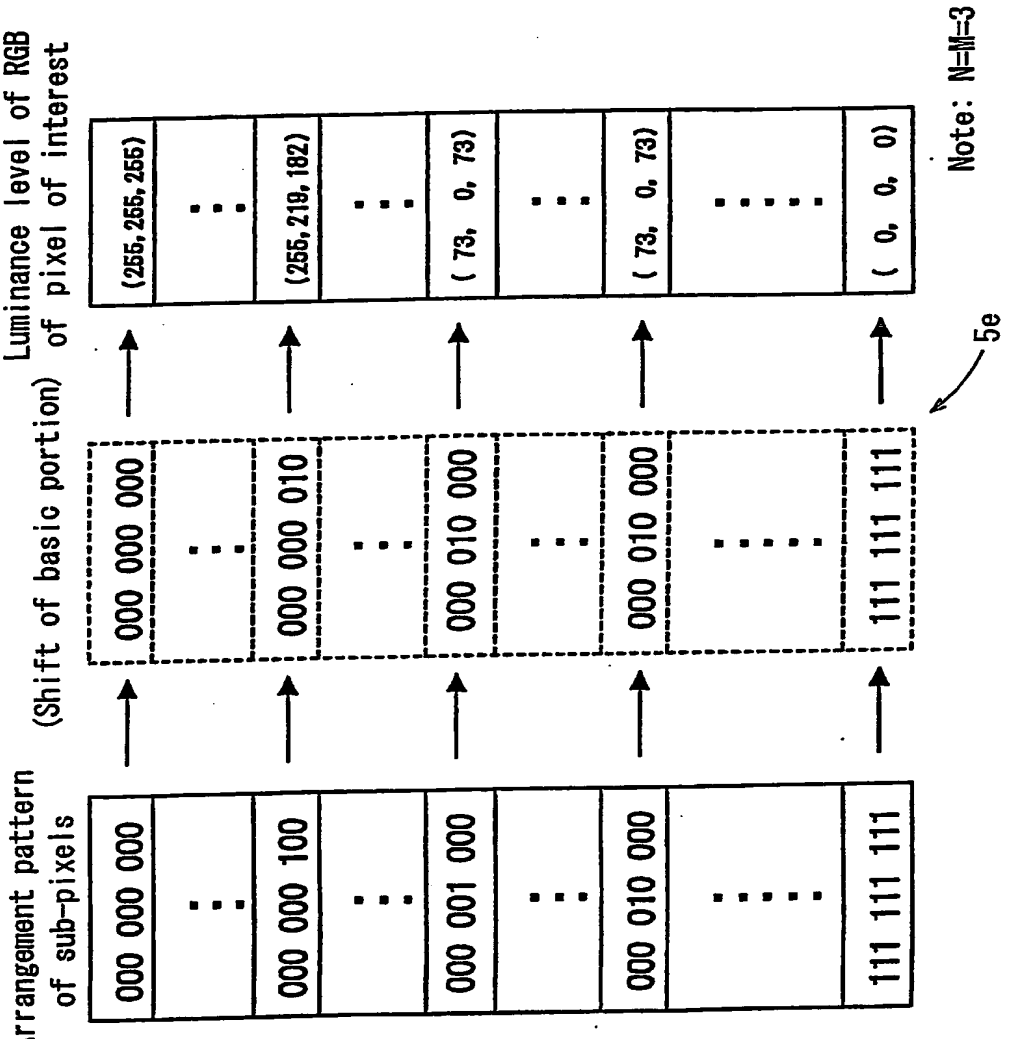

Arrangement pattern of sub-pixels
(Shift of basic portion)
Luminance level of RGB of pixel of interest
Note: N=M=3
5e
000 000 000
000 000 100
000 001 000
000 010 000
111 111 111
000 000 000
000 000 010
000 010 000
000 010 000
111 111 111
(255, 255, 255)
(255, 219, 182)
( 73, 0, 73)
( 73, 0, 73)
( 0, 0, 0)

FIG.6

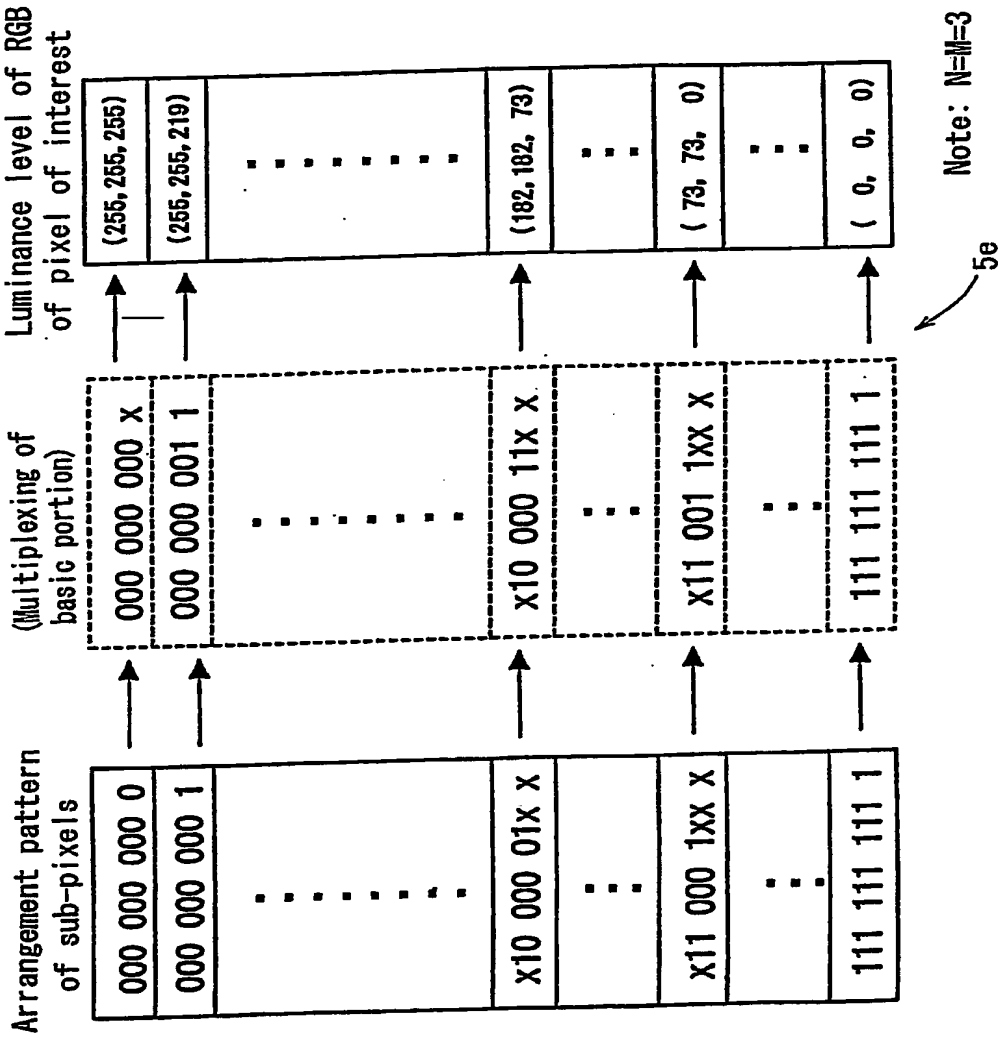
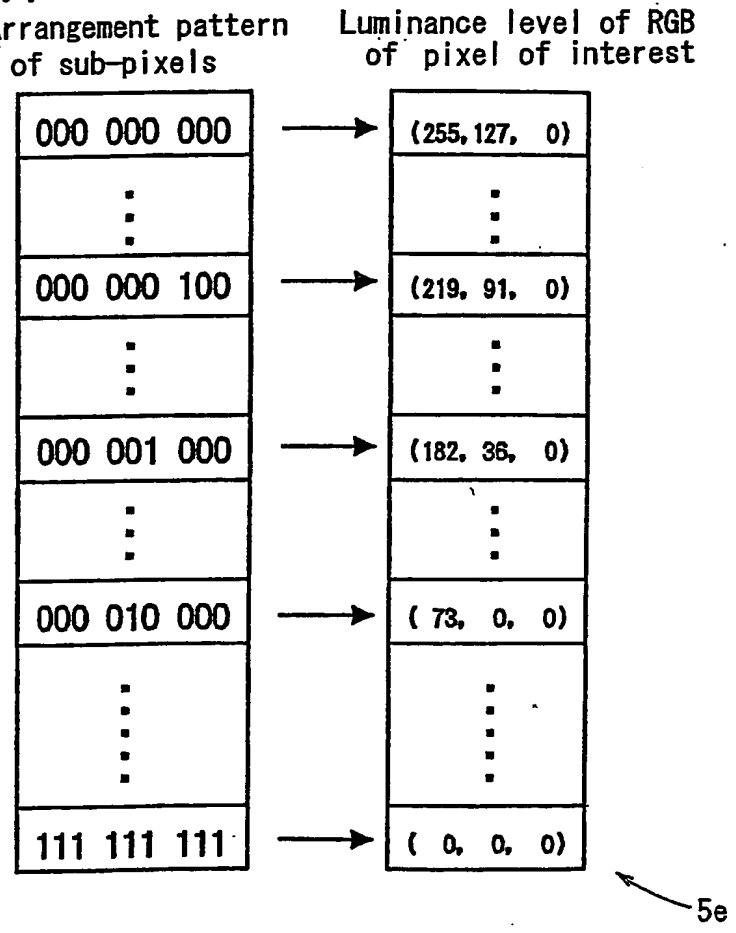

Luminance level of RGB of pixel of interest
(255, 255, 255)
(256, 255, 219)
(182, 182, 73)
( 73, 73, 0)
( 0, 0, 0)
Note: N=M=3
5e
(Multiplexing of basic portion)
000 000 000 x
000 000 001 1
x10 000 11x x
x11 001 1xx x
111 111 111 1
Arrangement pattern of sub-pixels
000 000 000 0
000 000 000 1
x10 000 01x x
x11 000 1xx x
111 111 111 1

*FIG. 7*




Note: Background color is orange (255, 127, 0); and N=M=3

FIG.8

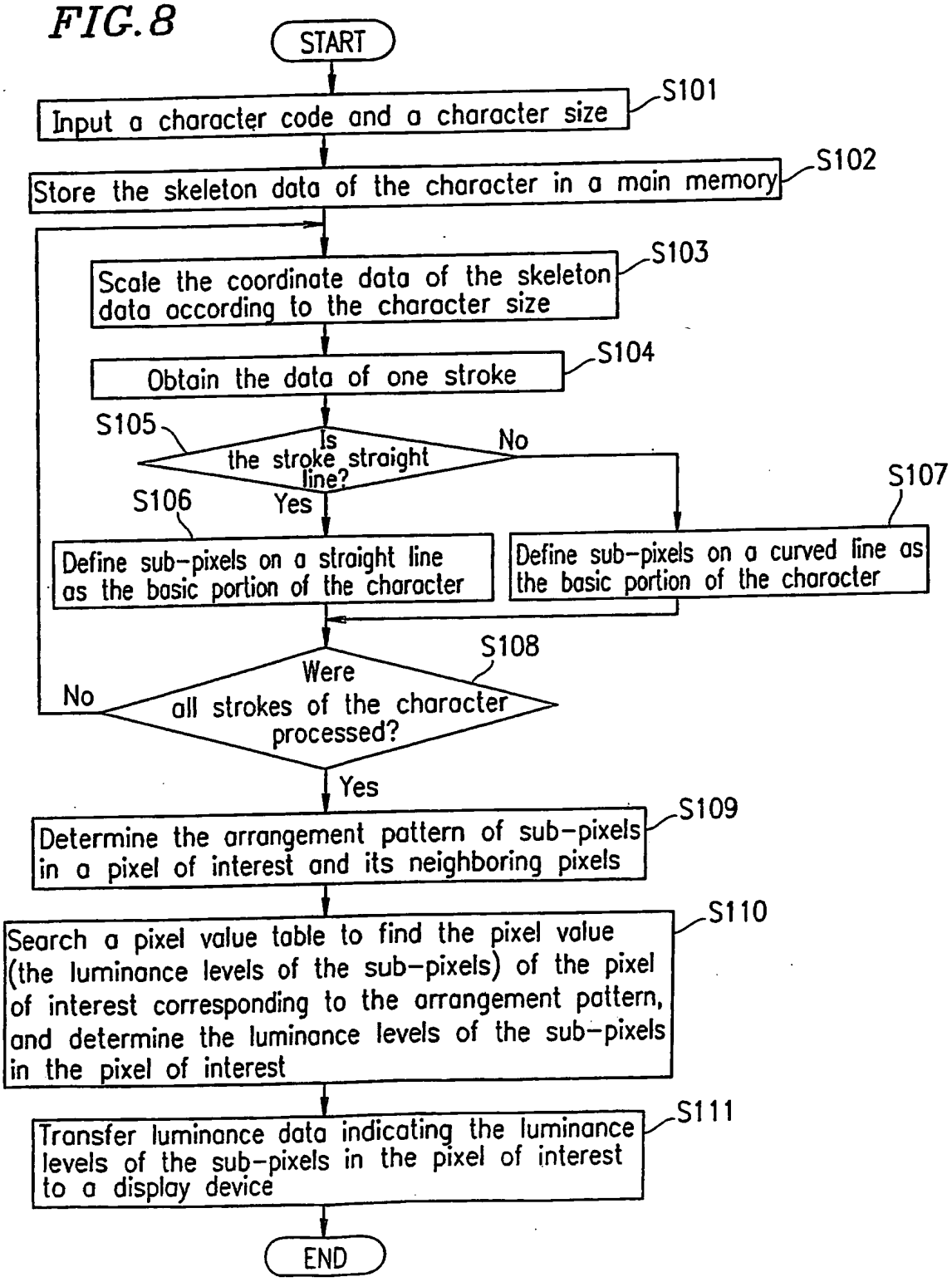

START
Input a character code and a character size
S101
Store the skeleton data of the character in a main memory
S102
Scale the coordinate data of the skeleton data according to the character size
S103
Obtain the data of one stroke
S104
S105
Is the stroke straight line?
No
Yes
S106
S107
Define sub-pixels on a straight line as the basic portion of the character
Define sub-pixels on a curved line as the basic portion of the character
S108
Were all strokes of the character processed?
No
Yes
Determine the arrangement pattern of sub-pixels in a pixel of interest and its neighboring pixels
S109
Search a pixel value table to find the pixel value (the luminance levels of the sub-pixels) of the pixel of interest corresponding to the arrangement pattern, and determine the luminance levels of the sub-pixels in the pixel of interest
S110
Transfer luminance data indicating the luminance levels of the sub-pixels in the pixel of interest to a display device
S111
END

*FIG. 9*

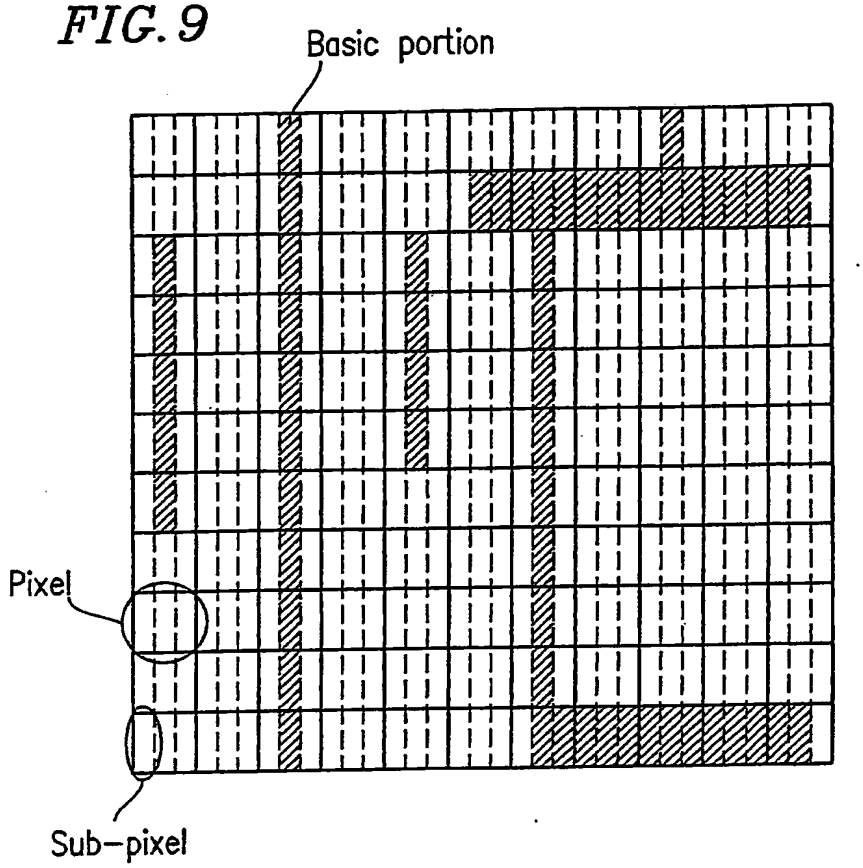



*FIG. 10*

Correction table 5c

| | | Correction pattern 1 | Correction pattern 2 |
|---|---|---|---|
| Color element level | Sub-pixel 1 | 5 | 4 |
| | Sub-pixel 2 | 2 | 2 |
| | Sub-pixel 3 | 1 | 1 |

*FIG. 11*

Luminance table 5d

| Color element level | Luminance level R | G | B |
|---|---|---|---|
| 7 | 0 | 0 | 0 |
| 6 | 36 | 36 | 36 |
| 5 | 73 | 73 | 73 |
| 4 | 109 | 109 | 109 |
| 3 | 146 | 146 | 146 |
| 2 | 182 | 182 | 182 |
| 1 | 219 | 219 | 219 |
| 0 | 255 | 255 | 255 |

FIG. 12

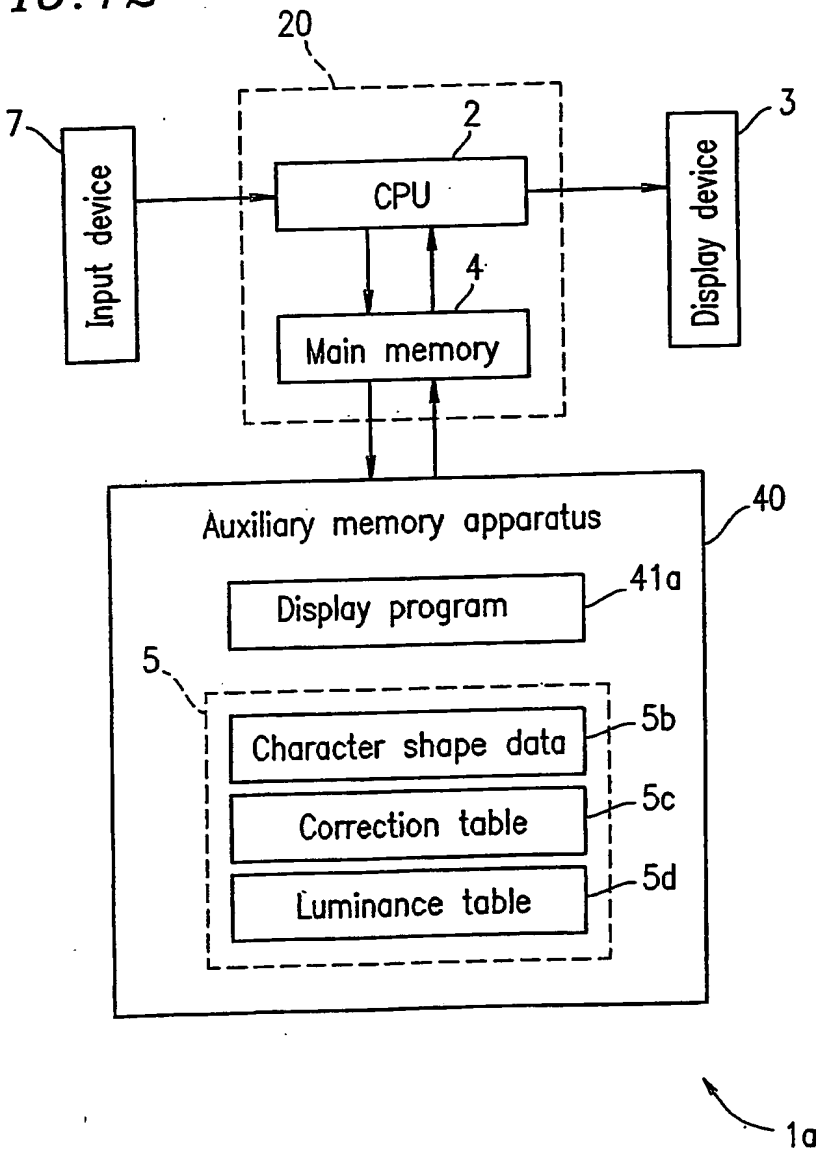

20
7
Input device
2
CPU
3
Display device
4
Main memory
Auxiliary memory apparatus
40
Display program
41a
5
Character shape data
5b
Correction table
5c
Luminance table
5d
1a

*FIG. 13A*

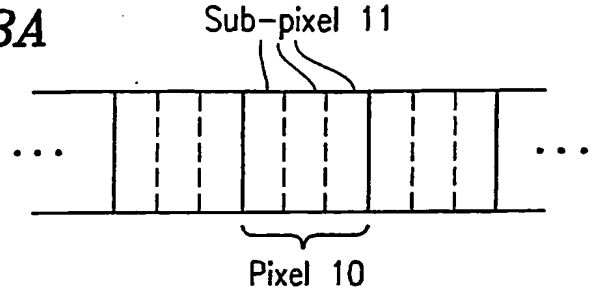



*FIG. 13B*

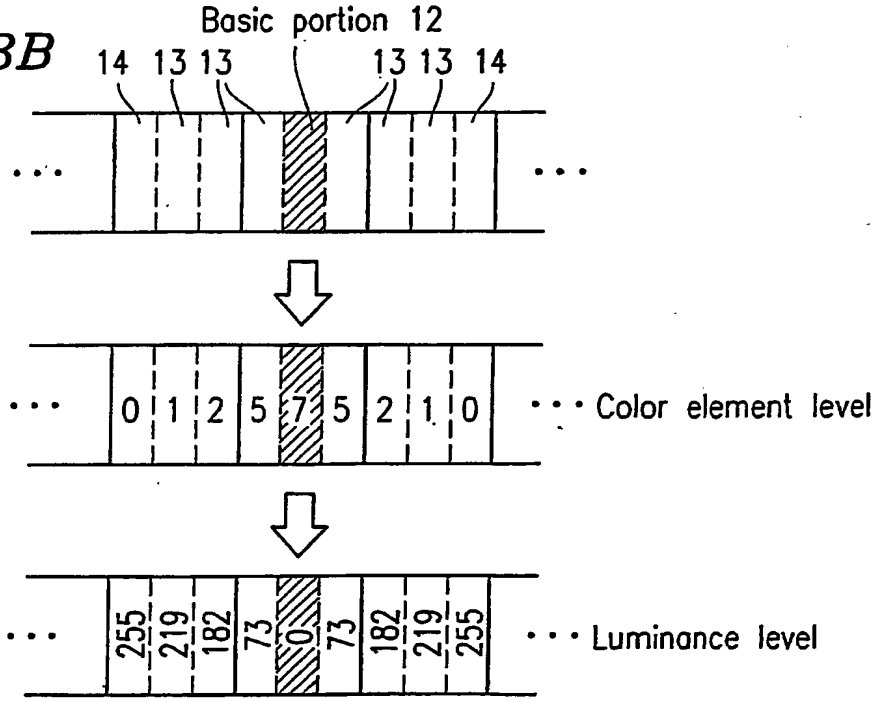


*FIG. 14*

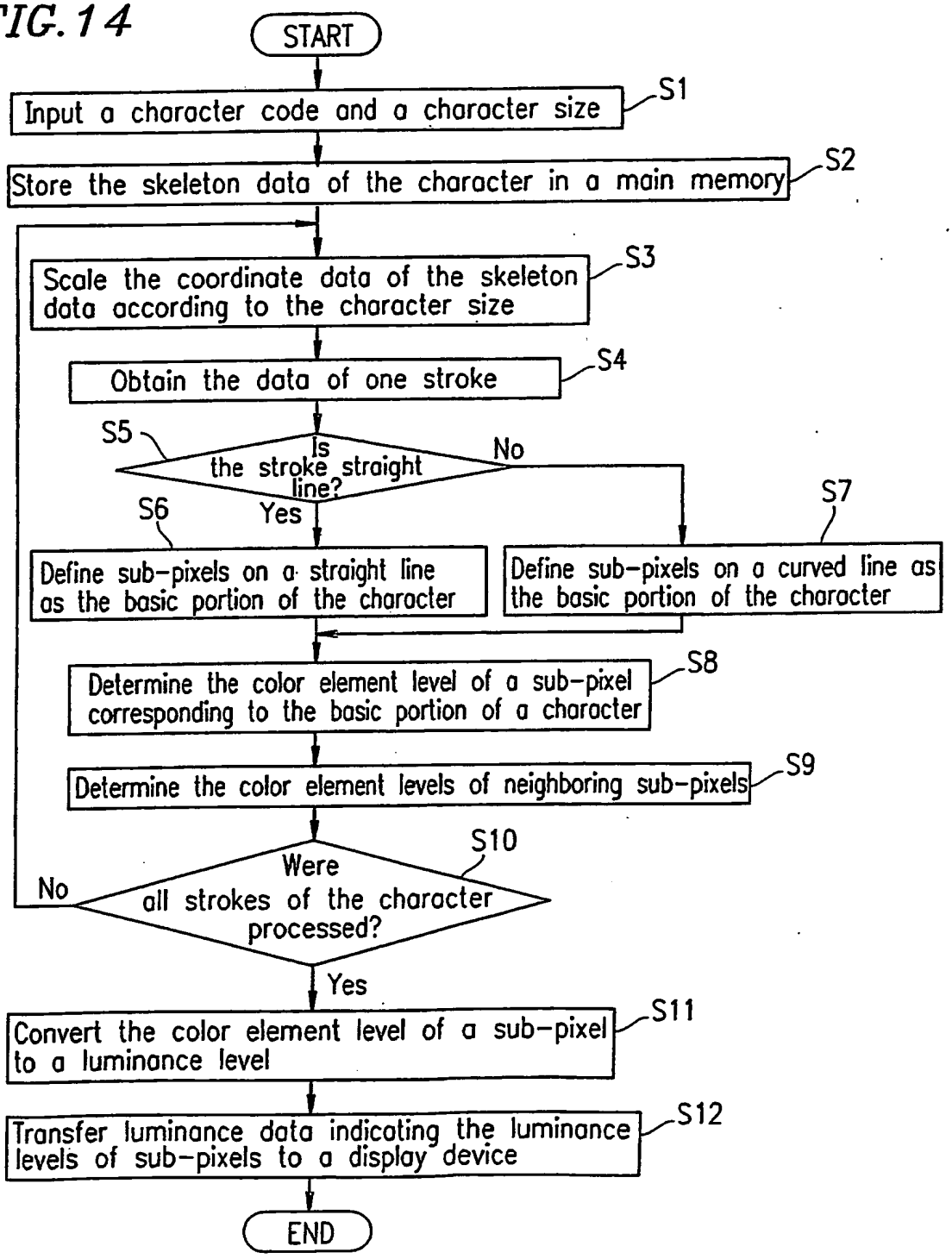

START
Input a character code and a character size
S1
Store the skeleton data of the character in a main memory
S2
Scale the coordinate data of the skeleton data according to the character size
S3
Obtain the data of one stroke
S4
S5
Is the stroke straight line?
No
Yes
S6
S7
Define sub-pixels on a straight line as the basic portion of the character
Define sub-pixels on a curved line as the basic portion of the character
Determine the color element level of a sub-pixel corresponding to the basic portion of a character
S8
Determine the color element levels of neighboring sub-pixels
S9
S10
Were all strokes of the character processed?
No
Yes
Convert the color element level of a sub-pixel to a luminance level
S11
Transfer luminance data indicating the luminance levels of sub-pixels to a display device
S12
END

*FIG. 15*

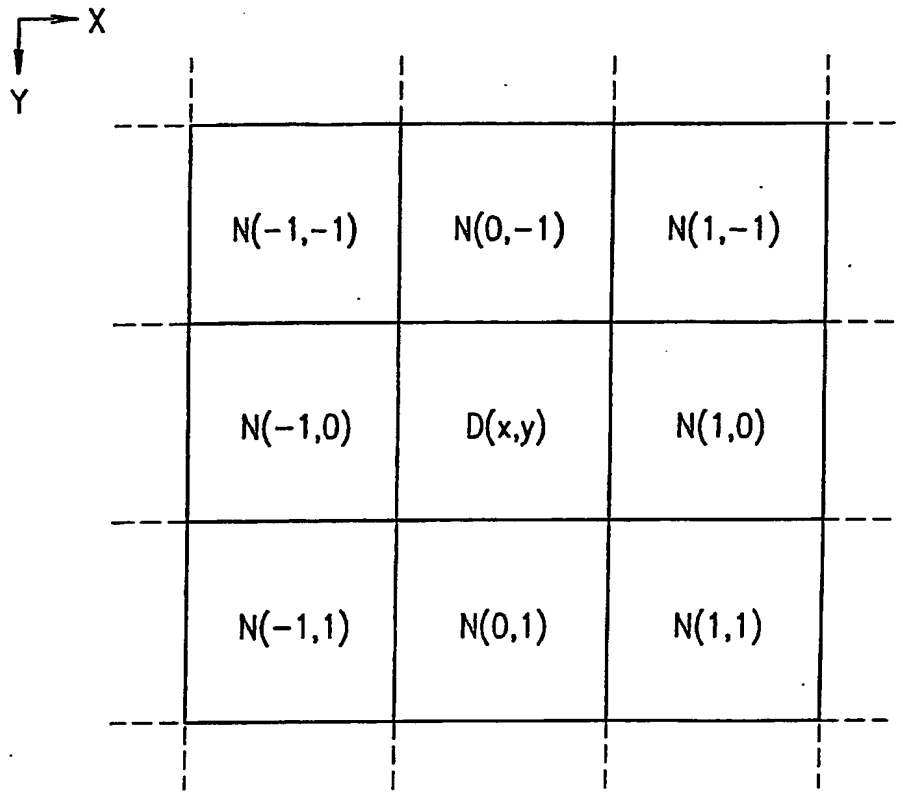


*FIG. 16*

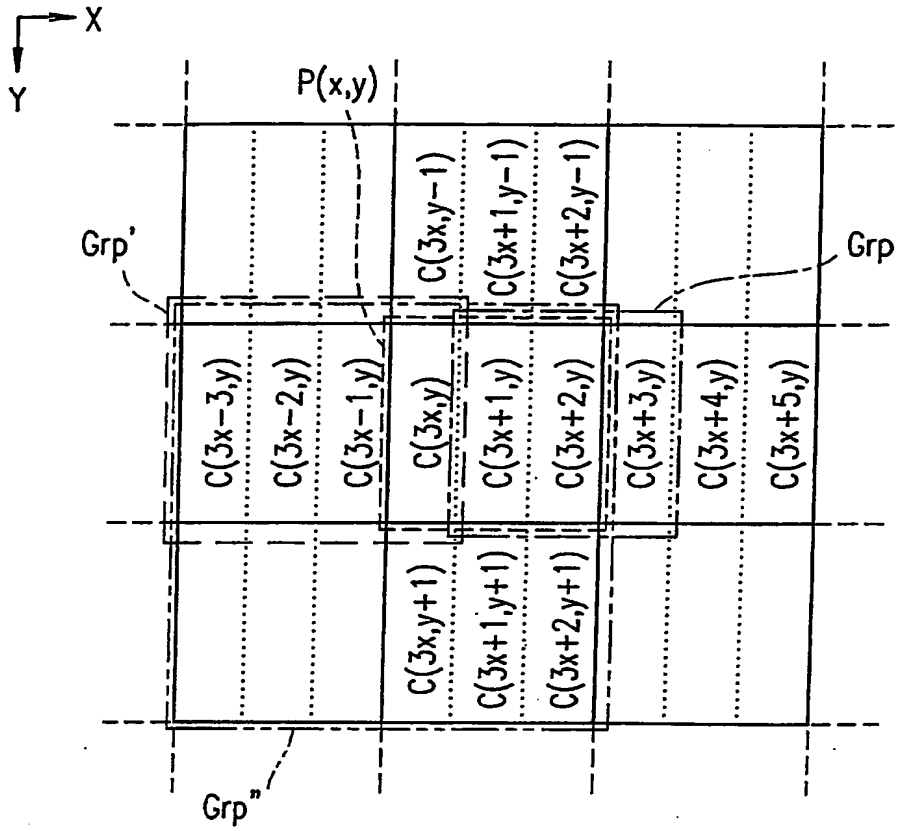
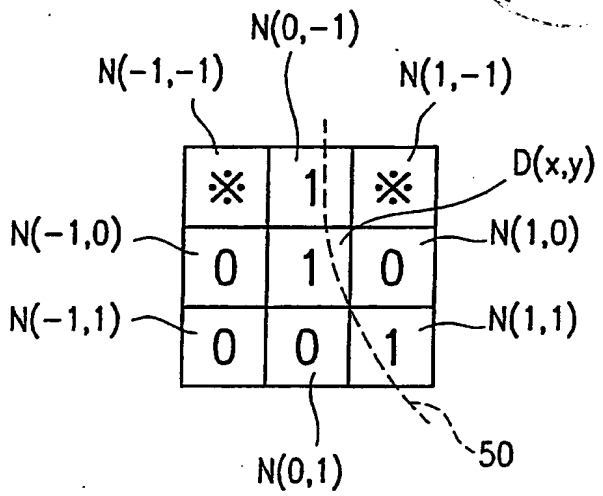

X
Y
P(x,y)
Grp'
Grp
Grp"
C(3x-3,y)
C(3x-2,y)
C(3x-1,y)
C(3x,y)
C(3x+1,y)
C(3x+2,y)
C(3x+3,y)
C(3x+4,y)
C(3x+5,y)
C(3x,y-1)
C(3x+1,y-1)
C(3x+2,y-1)
C(3x,y+1)
C(3x+1,y+1)
C(3x+2,y+1)

FIG. 17A



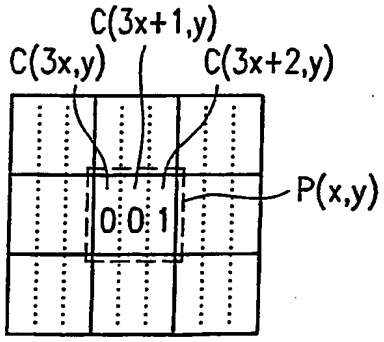


FIG. 17B